CENTER *for* MEDICAL INTEROPERABILITY

December 11, 2017

Chairman Ajit Pai
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Commissioner Mignon Clyburn
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Commissioner Michael O'Rielly
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Commissioner Jessica Rosenworcel
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Commissioner Brendan Carr
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz (GN Docket No. 17-183)

Dear Chairman Pai and Commissioners Clyburn, O'Rielly, Rosenworcel, and Carr:

Wi-Fi technologies have become a key driver for healthcare operations and are critical in enabling safe, high quality and efficient care for patients and care teams. Additional spectrum resources are needed to address growing demand. The Center for Medical Interoperability therefore supports the FCC's decision to find ways to expand unlicensed use of mid-band spectrum, and urges the Commission to adopt a Notice of Proposed Rulemaking ("NPRM") proposing to permit unlicensed operations throughout the 6 GHz band, based on the record it gathered in response to the recent Notice of Inquiry.

The Center for Medical Interoperability, representing a diverse group of healthcare organizations, has a unique perspective on healthcare technology trends. The Center is a 501 (c) (3) cooperative research and development lab founded by health systems to simplify and advance data sharing among medical technologies and systems. We provide a centralized, vendor-neutral approach to performing technical work that enables person-centered care, test and certify devices and systems, and promote the adoption of scalable solutions and an environment of data liquidity.

From this vantage point, the central role that Wi-Fi technologies play in healthcare delivery today is clear. Healthcare relies predominantly on the unlicensed spectrum for transport of guest, enterprise and clinical data. Increasingly, staff carry Wi-Fi enabled portable devices to serve patients throughout their facilities resulting in far greater numbers of wireless devices than ever before. Patient worn clinical devices are increasingly wireless for convenience and to promote the mobility necessary for recovery. And Wi-Fi is the primary way that patients access their patient information portals within healthcare settings.

However, unlicensed bands are not keeping up with the exploding demand in clinical and other healthcare environments.

- *Large, complex facilities like hospitals with a numerous and diverse wireless client population, require many channels for channel planning, RF interference mitigation, and traffic segregation.*

- *At 2.4ghz given only three clear channels, it is impossible to channel plan in three dimensions across multiple hospital floors without tremendous co-channel interference. In addition, widespread use of 2.4 GHz for non Wi-Fi devices such as DECT phones, location beacons, Bluetooth and various industrial systems, leads to high interference and makes the 2.4 GHz band unsuitable for trusted wireless services in the hospital.*

- *Medical systems increasingly gravitate to the 5ghz band to escape the 2.4 GHz issues yet the proliferation of smartphones and tablets by both clinicians and guests are starting to crowd the 5GHz spectrum.*

- *Guest and patient devices brought into the hospital are consuming upwards of 90% of airtime in many facilities which impacts clinical data and clinician communications systems. To alleviate this problem, it is increasingly common to attempt to dedicate specific channels to guest vs clinical use, increasing the pressure on the currently available 5ghz channels.*

- *Absent additional unlicensed channels at 6 GHz, the need for both a greater number of channels, and for wider channels in the existing 5 GHz space, will lead to similar co-channel interference and congestion in the 5GHz band as is currently found at 2.4 GHz.*

The amount of data, number of simultaneous sessions, and diversity of devices on healthcare Wi-Fi systems is growing substantially each year. The U.S. has not increased unlicensed spectrum resources in the core mid bands for more than a decade. Consequently, study after study shows that the U.S. economy requires substantial new unlicensed spectrum in the near term. The Center for Medical Interoperability believes that the 6 GHz band is the answer to this challenge and respectfully encourages the Commission to move ahead with an NPRM as quickly as possible.

Sincerely,

Ed Cantwell
President & Chief Executive Officer